

In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claim 3 without prejudice or disclaimer.

Please amend pending claims 1, 8, 10, and 12 as noted below.

1. (Currently Amended) A pixel gain amplifier circuit comprising:
an amplifier having an input and an output;
an input capacitor, coupled to the input of the amplifier, onto which input capacitor charge from an input pixel is sampled during a first of first and second time phases; and
a feedback capacitor, coupled between the input and the output of the amplifier, that samples a reference voltage during the first time phase and receives charge from the input capacitor during the second time phase.
2. (Original) The pixel gain amplifier circuit as claimed in claim 1 wherein the input capacitor includes a variable capacitor.
3. CANCELED
4. (Original) The pixel gain amplifier circuit of ~~claims 2 or 3~~ claim 2 wherein a capacitance of the input capacitor changes at a rate corresponding to a rate at which pixels are input into the circuit.
5. (Original) The pixel gain amplifier circuit as claimed in claim 1 wherein the feedback capacitor includes a variable capacitor.
6. (Original) The pixel gain amplifier circuit as claimed in claim 5 wherein the feedback capacitor comprises a capacitor array.

7. (Original) The pixel gain amplifier circuit of claims 5 or 6 wherein a capacitance of the feedback capacitor changes at a rate corresponding to a rate at which pixels are input into the circuit.

8. (Original) The pixel gain amplifier circuit as claimed in claim 1 further comprising an offset correction circuit.

9. (Currently Amended) A method of amplifying input pixels comprising the steps of:
sampling an input pixel during a first of first and second time phases;
amplifying the sampled input pixel during the second time phase; and
controlling a gain of the amplification for each pixel in response to a gain control signal comprising information related to a desired gain.

10. (Currently Amended) A pixel gain amplifier circuit comprising:
an amplifier having an input, an output and a gain;
means for varying the gain of the amplifier from a first gain for a first pixel to a second gain for a second pixel, wherein the first and second gains are determined, at least in part, by an input capacitor and a feedback capacitor according to a rigid rate.

11. (Original) The pixel gain amplifier circuit according to claim 10 wherein the means for varying the gain of the amplifier includes a capacitor array.

12. (Currently Amended) The pixel gain amplifier circuit according to claim 10 wherein ~~the rapid rate corresponds to a~~ means for varying the gain of the amplifier comprises means for varying the gain of the amplifier at a rate corresponding to a rate at which pixels are input into the circuit.

13. (New) The pixel gain amplifier circuit of claim 8, wherein an input of the offset correction circuit is coupled to the output of the amplifier and an output of the offset correction circuit is coupled to the input of the amplifier.

14. (New) The pixel gain amplifier circuit of claim 10, wherein the input capacitor is a variable capacitor.

15. (New) The pixel gain amplifier circuit of claim 10, wherein the feedback capacitor is a variable capacitor.

16. (New) The pixel gain amplifier circuit of claim 10, further comprising an offset correction circuit, wherein an input of the offset correction circuit is coupled to the output of the amplifier and an output of the offset correction circuit is coupled to the input of the amplifier.

17. (New) The pixel gain amplifier circuit of claim 1, wherein the input capacitor and the feedback capacitor at least partially determine a gain of the circuit, and wherein said gain is variable.

18. (New) The pixel gain amplifier circuit of claim 17, further comprising means for changing said gain at the pixel rate.